

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

CULP, et al.

Filing Date:

December 4, 2001

Title:

SYSTEM AND METHOD FOR REMOTE  
IDENTIFICATION OF ENERGY CONSUMPTION  
SYSTEMS AND COMPONENTS

Honorable Assistant Commissioner  
for Patents  
P.O. Box 2327  
Arlington, VA 22202

Dear Sir:

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*Willie Jiles*

Willie Jiles

*12-4-01*

Date

**PRELIMINARY AMENDMENT**

Prior to the initial review of this non-provisional utility patent application entitled *System and Method for Remote Identification of Energy Consumption Systems and Components* by Culp, et al., please amend the application as follows:

**IN THE CLAIMS:**

For the convenience of the Examiner, all pending claims of the present Application are shown below. Please refer to the attached sheets showing a marked up version of any amendments to the claims.

1. A method for remote energy consumption system identification of a facility, comprising:

receiving aggregated energy consumption data associated with the facility;

receiving external variable data for the facility corresponding to the aggregated energy consumption data;

generating facility data associated with the facility;

generating disaggregated energy consumption data for the facility from the aggregated energy consumption data using the facility data and the external variable data; and

identifying an energy consumption system of the facility using the disaggregated energy consumption data.

2. The method of Claim 1, further comprising validating the aggregated energy consumption data.

3. The method of Claim 2, wherein validating the aggregated energy consumption data comprises:

analyzing the aggregated energy consumption data for missing data; and

reconstructing the missing data.

4 The method of Claim 3, wherein reconstructing the missing data comprises:

identifying a comparable facility;

retrieving energy consumption data associated with the comparable facility; and

reconstructing the missing data using the comparable facility energy consumption data.

5. The method of Claim 1, wherein receiving the aggregated energy consumption data comprises receiving the aggregated energy consumption data from an energy consumption database of an energy supplier.

6. The method of Claim 1, wherein receiving the aggregated energy consumption data comprises receiving the aggregated energy consumption data from a data collector disposed at the facility.

7. The method of Claim 1, wherein identifying an energy consumption system comprises identifying an energy consumption system for controlling an internal environment of the facility.

8. The method of Claim 1, wherein generating the facility data comprises generating the facility data based on the aggregated energy consumption data.

9. The method of Claim 1, wherein generating the facility data comprises generating the facility data based on physical characteristics of the facility.

10. The method of Claim 1, wherein receiving the external variable data comprises receiving environmental data corresponding to the aggregated energy consumption data.

11. The method of Claim 10, wherein receiving the environmental data comprises receiving the environmental data from an environmental service.

12. The method of Claim 1, further comprising determining a modification of operating parameters of the energy consumption system using the disaggregated energy consumption data.

13. The method of Claim 1, wherein generating disaggregated energy consumption data comprises determining energy consumption for a particular time interval

from the aggregated energy consumption data, and wherein identifying an energy consumption system comprises identifying the energy consumption system from the energy consumption for the particular time interval.

14. The method of Claim 1, wherein generating disaggregated energy consumption data comprises:

accessing an energy consumption database of an energy supplier, the energy consumption database having energy consumption data associated with facility; and

evaluating the energy consumption data of the energy supplier energy consumption database and the facility data to generate the disaggregated energy consumption data corresponding to the facility.

15. A system for remote energy consumption system identification of a facility, comprising:

a processor;

a memory coupled to the processor;

an energy consumption database accessible by the processor, the energy consumption database having aggregated energy consumption data associated with the facility;

a facility database accessible by the processor, the facility database having facility data associated with the facility;

an external variable database accessible by the processor, the external variable database having external variable data corresponding to the energy consumption data; and

an analysis engine residing in the memory and executable by the processor, the analysis engine operable to generate disaggregated energy consumption data using the aggregated energy consumption data, the facility data, and the external variable data, the analysis engine further operable to identify an energy consumption system of the facility using the disaggregated energy consumption data.

16. The system of Claim 15, further comprising a validation engine residing in the memory and executable by the processor, the validation engine operable to validate the aggregated energy consumption data.

17. The system of Claim 16, wherein the validation engine is operable to analyze the aggregated energy consumption data for missing data and, in response to determining that missing data exists, reconstruct the missing data.

18. The system of Claim 17, wherein the processor is further operable to access energy consumption data associated with a comparable facility, and wherein the validation engine is operable to reconstruct the missing data using the comparable facility energy consumption data.

19. The system of Claim 15, wherein the aggregated energy consumption data comprises aggregated energy consumption data residing in an energy consumption database of an energy supplier.

20. The system of Claim 15, further comprising a data collector disposed at the facility, the data collector operable to transmit the aggregated energy consumption data to the processor.

21. The system of Claim 15, wherein the facility data is generated based on the aggregated energy consumption data.

22. The system of Claim 15, wherein the facility data comprises facility data based on physical characteristics of the facility.

23. The system of Claim 15, wherein the external variable data comprises environmental data corresponding to the aggregated energy consumption data.

24. The system of Claim 15, wherein the analysis engine is further operable to determine operating parameters of the energy consumption system using the disaggregated energy consumption data.

25. The system of Claim 24, wherein the analysis engine is further operable to determine a modification to the operating parameters of the energy consumption system from the disaggregated energy consumption data.

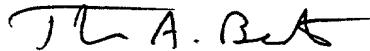
**CONCLUSION**

Early and favorable acceptance of the application and this preliminary amendment is respectfully requested.

If there are matters that can be discussed by telephone to further the prosecution of this application, Applicants respectfully request that the Examiner call the attorney at the number listed below.

Respectfully submitted,

BAKER BOTTS L.L.P.  
Attorneys for Applicants



Thomas A. Beaton  
Reg. No. 46,543

**Correspondence Address:**

Baker Botts L.L.P.  
2001 Ross Avenue, Suite 600  
Dallas, Texas 75201-2980  
Tel: 214.953.6464; Fax: 214.661.4464

Date: 12/04/01

**MARKED-UP VERSION OF SPECIFICATION AND CLAIM AMENDMENTS**

For the convenience of the Examiner, all claims have been listed whether or not an amendment has been made. The Claims have been amended as follows:

1. A method for remote energy consumption system identification of a facility, comprising:

receiving aggregated energy consumption data associated with the facility;

receiving external variable data for the facility corresponding to the aggregated energy consumption data;

generating facility data associated with the facility;

generating disaggregated energy consumption data for the facility from the aggregated energy consumption data using the facility data and the external variable data; and

identifying an energy consumption system of the facility using the disaggregated energy consumption data.

2. The method of Claim 1, further comprising validating the aggregated energy consumption data.

3. The method of Claim 2, wherein validating the aggregated energy consumption data comprises:

analyzing the aggregated energy consumption data for missing data; and

reconstructing the missing data.

4 The method of Claim 3, wherein reconstructing the missing data comprises:

identifying a comparable facility;

retrieving energy consumption data associated with the comparable facility; and

reconstructing the missing data using the comparable facility energy consumption data.

5. The method of Claim 1, wherein receiving the aggregated energy consumption data comprises receiving the aggregated energy consumption data from an energy consumption database of an energy supplier.

6. The method of Claim 1, wherein receiving the aggregated energy consumption data comprises receiving the aggregated energy consumption data from a data collector disposed at the facility.

7. The method of Claim 1, wherein identifying an energy consumption system comprises identifying an energy consumption system for controlling an internal environment of the facility.

8. The method of Claim 1, wherein generating the facility data comprises generating the facility data based on the aggregated energy consumption data.

9. The method of Claim 1, wherein generating the facility data comprises generating the facility data based on physical characteristics of the facility.

10. The method of Claim 1, wherein receiving the external variable data comprises receiving environmental data corresponding to the aggregated energy consumption data.

11. The method of Claim 10, wherein receiving the environmental data comprises receiving the environmental data from an environmental service.

12. The method of Claim 1, further comprising determining a modification of operating parameters of the energy consumption system using the disaggregated energy consumption data.

13. The method of Claim 1, wherein generating disaggregated energy consumption data comprises determining energy consumption for a particular time interval

from the aggregated energy consumption data, and wherein identifying an energy consumption system comprises identifying the energy consumption system from the energy consumption for the particular time interval.

14. The method of Claim 1, wherein generating disaggregated energy consumption data comprises:

accessing an energy consumption database of an energy supplier, the energy consumption database having energy consumption data associated with facility; and

evaluating the energy consumption data of the energy supplier energy consumption database and the facility data to generate the disaggregated energy consumption data corresponding to the facility.

15. A system for remote energy consumption system identification of a facility, comprising:

a processor;

a memory coupled to the processor;

an energy consumption database accessible by the processor, the energy consumption database having aggregated energy consumption data associated with the facility;

a facility database accessible by the processor, the facility database having facility data associated with the facility;

an external variable database accessible by the processor, the external variable database having external variable data corresponding to the energy consumption data; and

an analysis engine residing in the memory and executable by the processor, the analysis engine operable to generate disaggregated energy consumption data using the aggregated energy consumption data, the facility data, and the external variable data, the analysis engine further operable to identify an energy consumption system of the facility using the disaggregated energy consumption data.

16. The system of Claim 15, further comprising a validation engine residing in the memory and executable by the processor, the validation engine operable to validate the aggregated energy consumption data.

17. The system of Claim 16, wherein the validation engine is operable to analyze the aggregated energy consumption data for missing data and, in response to determining that missing data exists, reconstruct the missing data.

18. The system of Claim 17, wherein the processor is further operable to access energy consumption data associated with a comparable facility, and wherein the validation engine is operable to reconstruct the missing data using the comparable facility energy consumption data.

19. The system of Claim 15, wherein the aggregated energy consumption data comprises aggregated energy consumption data residing in an energy consumption database of an energy supplier.

**20. [21.]** The system of Claim 15, further comprising a data collector disposed at the facility, the data collector operable to transmit the aggregated energy consumption data to the processor.

**21. [22.]** The system of Claim 15, wherein the facility data is generated based on the aggregated energy consumption data.

**22. [23.]** The system of Claim 15, wherein the facility data comprises facility data based on physical characteristics of the facility.

**23. [24.]** The system of Claim 15, wherein the external variable data comprises environmental data corresponding to the aggregated energy consumption data.

**24. [25.]** The system of Claim 15, wherein the analysis engine is further operable to determine operating parameters of the energy consumption system using the disaggregated energy consumption data.

**25.** [26.] The system of Claim **24** [25], wherein the analysis engine is further operable to determine a modification to the operating parameters of the energy consumption system from the disaggregated energy consumption data.